

t1_cc0sp2
(TMZsnqmZx3GV79afe7Uk5Xb3Qz64PyyUS3R)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_cc0sp2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_cc0sp2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v5_cfdiff_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (\neg X1 \in X2) \Rightarrow (k8_relat_1 (k2_funcop_1 X0 X1) X2 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X2) \Rightarrow (k8_relat_1 (k2_funcop_1 X0 X1) X2 = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k8_relset_1 X0 X1 X2 X3 = k8_relat_1 \\ & X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (5)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(v4_pre_topc (k2_struct_0 X0) X0) \quad (6)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k8_relset_1 X0 X1 X2 X3) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((l1_struct_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow((v1_funct_1 (k1_cc0sp2 X0 X1))\wedge((v1_funct_2 (k1_cc0sp2 X0 X1) (u1_struct_0 X0) k2_numbers)\wedge(m1_subset_1 (k1_cc0sp2 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k2_numbers)))))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k2_struct_0 X0 = u1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(k1_cc0sp2 X0 X1 = k7_funcop_1 (u1_struct_0 X0) X1)) \quad (12)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) k2_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k2_numbers))))))\Rightarrow((v1_cc0sp2 X1 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 k2_numbers))\Rightarrow((v5_cfdiff_1 X2)\Rightarrow(v4_pre_topc (k8_relset_1 (u1_struct_0 X0) k2_numbers X1 X2) X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v1_xboole_0 X1)\Rightarrow(v4_pre_topc X1 X0))) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & \quad X0))) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) k2_numbers) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k2_numbers)))))) \Rightarrow \\ & ((r2_funct_2 (u1_struct_0 X0) k2_numbers X2 (k1_cc0sp2 X0 X1)) \Rightarrow \\ & \quad (v1_cc0sp2 X2 X0)))) \end{aligned}$$